

**BEFORE THE SOUTH DAKOTA PUBLIC UTILITIES COMMISSION
OF THE STATE OF SOUTH DAKOTA**

IN RE: IN THE MATTER OF THE APPLICATION OF MIDAMERICAN ENERGY COMPANY FOR AUTHORITY TO INCREASE NATURAL GAS RATES	DOCKET NO. NG26-_____
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**DIRECT TESTIMONY
OF
DREW D. SMITH**

I. WITNESS INFORMATION

2 **Q. Please state your name and business address.**

3 A. My name is Drew D. Smith. My business address is 4299 NW Urbandale Drive,
4 Urbandale, Iowa 50322.

5 **Q. By whom are you employed and in what capacity?**

6 A. I am employed by MidAmerican Energy Company (“MidAmerican”) as Vice
7 President, IT Applications.

8 **Q. Please describe the responsibilities of your current position.**

9 A. I serve as MidAmerican’s information technology (“IT”) business lead. In that
10 role, I am responsible for ensuring that MidAmerican’s technology systems are
11 reliable, secure and cost-effective, and that IT investments support the safe and
12 efficient delivery of utility services to customers. I do that in a shared IT structure
13 with other U.S.-based Berkshire Hathaway Energy Company (“BHE”) utilities.
14 Within that structure, I oversee the technical application functions across the
15 BHE utilities, which includes developing, implementing and supporting software
16 across those companies to achieve cost and operational efficiencies while
17 ensuring each utility, including MidAmerican, pays only for the systems and
18 services that serve and benefit its customers.

19 **Q. Please describe your educational background and business experience.**

20 A. I graduated from Briar Cliff University in 2007 with a double major in Business
21 Administration and Management Information Systems. In 2008, I joined
22 MidAmerican as a Software Engineer 1. Since then, I have held a variety of
23 positions of increasing responsibility within IT, including Software Engineer 2,

1 Software Engineer 3, Senior Software Engineer, IT Applications Manager, IT
2 Applications Director, IT Program Director, and Senior Director of IT
3 Applications. In August 2025, I was appointed to my current position as Vice
4 President of IT Applications.

5 **Q. Have you testified previously before the South Dakota Public Utilities**
6 **Commission?**

7 A. No, I have not testified before the South Dakota Public Utilities Commission.
8 However, I have testified before the Illinois Commerce Commission and the Iowa
9 Utilities Commission.

10 **II. PURPOSE OF DIRECT TESTIMONY**

11 **Q. What is the purpose of your direct testimony?**

12 A. The purpose of my testimony is to demonstrate that MidAmerican's investments
13 in the software applications included in this rate case are reasonable and prudent.
14 My testimony outlines the IT strategy behind these investments and details the
15 evolution of MidAmerican's IT governance since the previous rate case in 2022,
16 highlighting the consolidation of IT functions to achieve greater efficiency and
17 support MidAmerican's strategic direction. I also detail the projects included in
18 this rate case, describing the approach taken to allocate project costs to ensure
19 MidAmerican's customers only bear their fair and reasonable share of common
20 software applications and IT infrastructure, and explain how these projects
21 benefit MidAmerican's customers and position MidAmerican well for the future.

1 **Q. Please summarize your testimony.**

2 A. MidAmerican's IT strategy centers on modernizing aging, unsupported legacy
3 systems to ensure we continue to deliver safe, reliable, secure and cost-effective
4 utility service for our customers. The modernization projects described in my
5 testimony address decades-old technology that no longer meets performance,
6 disaster recovery, and security needs and does not adequately support new
7 functionality required by evolving customer expectations, cybersecurity threats,
8 and regulatory requirements.

9 As part of this IT strategy, MidAmerican has focused on implementing
10 cloud-based, Software-as-a-Service solutions with continuous updates and
11 maximizing out-of-the-box functionality to minimize customizations and long-
12 term operational risk. By consolidating systems under a common vendor
13 platform – primarily Oracle – MidAmerican has improved integration and
14 efficiency across finance, supply chain, operations and field execution. These
15 efforts are carefully planned and delivered to control risks, costs and impacts on
16 both employees and customers, ensuring that our technology investments are
17 forward-looking and responsive to ongoing demands.

18 MidAmerican evaluated and planned the work outlined in this testimony
19 and is delivering it in a manner that controls risks, costs and impacts to employees
20 and customers. This modernization effort shows MidAmerican's emphasis on
21 cybersecurity, adopting modern technology that customers expect, and helping
22 our internal teams leverage new tools. With ongoing investments and

1 improvements, MidAmerican's modernization strategy will ensure these systems
2 do not stagnate and continue to meet evolving demands.

3 The costs incurred for these projects are necessary to support a modern
4 utility business, and MidAmerican has taken diligent steps to ensure these
5 investments are implemented efficiently and effectively, so MidAmerican's
6 systems remain safe, secure and reliable while delivering the services and
7 functionality our customers and internal teams expect, now and in the future.

8 **Q. In addition to your testimony, are you sponsoring any exhibits?**

9 A. Yes. I am sponsoring Exhibit DDS 1.1, which provides an overview of the
10 software applications included in this rate case.

11 **III. MIDAMERICAN'S IT STRATEGY**

12 **Q. Please provide an overview of MidAmerican's IT strategy and how that has**
13 **influenced the projects and applications that are included in this rate case.**

14 A. MidAmerican's IT strategy is focused on modernizing aging, unsupported legacy
15 systems to ensure MidAmerican can continue to provide safe, reliable, secure and
16 cost-effective utility service to customers. Many of the systems replaced through
17 the projects included in this rate case were built on decades-old hardware, hosted
18 in local data centers, and no longer supported by vendors, which inhibited
19 performance, disaster recovery capabilities, security patching, and the ability to
20 adopt new functionality. As customer expectations, cybersecurity risks, and
21 regulatory requirements continue to evolve, maintaining these legacy platforms
22 was not prudent, effective or sustainable.

1 **Q. How did MidAmerican address these challenges?**

2 A. To address these challenges, MidAmerican pursued a coordinated modernization
3 strategy centered on keeping essential utility operations dependable, better
4 controlling long-term costs and improving customer-facing outcomes. From an
5 IT perspective, this was accomplished by:

- 6 • **Where possible, implementing cloud-based, Software-as-a-Service**
7 **(“SaaS”) solutions** that support continuous updates to emphasize standard
8 functionality, resiliency and security.
- 9 • **Maximizing “out-of-the-box” functionality and limiting customizations,**
10 which reduces long-term operational risk and supports more efficient
11 ongoing maintenance.
- 12 • **Aggregating systems under a common vendor platform** (as discussed
13 below, primarily Oracle) to achieve tighter integration and more efficient
14 workflows across finance, supply chain, operations and field execution.
- 15 • **Moving to a consolidated, shared IT structure** across domestic BHE
16 utilities to achieve economies of scale in MidAmerican’s IT systems and
17 support.

18 **Q. How did cybersecurity demands influence MidAmerican’s strategy?**

19 A. Cybersecurity concerns were a significant driver of MidAmerican’s IT strategy
20 because the energy sector faces persistent and increasingly sophisticated cyber
21 threats that directly implicate system reliability, customer data and public safety.¹

¹ Public reporting and testimony document multiple cybersecurity incidents affecting energy and other critical infrastructure. Notable examples include the May 2021 Colonial Pipeline ransomware attack, which shut down fuel deliveries for several days and prompted a federal emergency declaration; cyber incidents affecting industrial control system vendors serving the utility sector; and repeated warnings from

1 Legacy systems supporting critical utility functions were often difficult to secure,
2 slow to patch, and limited in their ability to provide real-time visibility into
3 system operations. MidAmerican determined that maintaining the status quo
4 would expose customers to unacceptable operational and security risks.
5 Accordingly, MidAmerican's IT strategy emphasizes modern, vendor-supported
6 systems; disciplined lifecycle and vulnerability management; improved system
7 visibility and resiliency; and continuous security improvements, complemented
8 by employee training and shared cybersecurity expertise across domestic BHE
9 utilities. This strengthens defenses against evolving cyber threats while ensuring
10 costs are reasonably controlled and appropriately allocated to customers.

11 **Q. Does MidAmerican's IT strategy benefit customers?**

12 A. Yes, the strategy I outlined offers many long-term benefits for customers. They
13 include the following:

- 14 • **Improved reliability and resiliency for customers:** Cloud-based systems
15 are hosted in modern, professionally managed environments designed for
16 high availability and robust disaster recovery. This improves system

U.S. law enforcement and national security officials that U.S. electric grids, pipelines, water systems, and other civilian infrastructure are targets of cybersecurity attacks. *See, e.g.,* U.S. Dept of Energy, Office of Cybersecurity, Energy Security, and Emergency Response (CESER), *Colonial Pipeline Cyber Incident* (May 2021), <https://www.energy.gov/ceser/colonial-pipeline-cyber-incident> (pipeline shut down May 7, 2021, in response to a ransomware attack; company announced restart May 13, 2021); Cybersecurity & Infrastructure Sec. Agency (CISA) et al., *PRC State-Sponsored Actors Compromise and Maintain Persistent Access to U.S. Critical Infrastructure*, Cybersecurity Advisory AA24-038A (Feb. 7, 2024), <https://www.cisa.gov/news-events/cybersecurity-advisories/aa24-038a>; CISA, *Industrial Control Systems Advisories* (multiple advisories released Jan. 11, 2024), <https://www.cisa.gov/news-events/alerts/2024/01/11/cisa-releases-nine-industrial-control-systems-advisories>. In January 2024 congressional testimony, FBI Director Christopher Wray stated that foreign actors are actively positioning within U.S. critical infrastructure networks, including energy systems, creating reliability, public safety, and economic risks. Fed. Bureau of Investigation, *Director Wray's Opening Statement to the House Select Committee on the Chinese Communist Party* (Jan. 31, 2024), <https://www.fbi.gov/news/speeches-and-testimony/director-wrays-opening-statement-to-the-house-select-committee-on-the-chinese-communist-party>.

1 performance and resilience compared to legacy systems hosted on aging
2 hardware in local (on-premises) data centers, which reduces the risk of IT
3 system outages that could affect things like billing, customer communications
4 or field response, especially during peak usage or emergency events.

- 5 • **Stronger protection of customer data and Company systems:** Unlike
6 legacy on-premises systems that may require 24-36 months to update, cloud
7 and SaaS platforms provide regular, automated security updates and patches,
8 typically on a quarterly cadence. This reduces the risk of operating on
9 unsupported or unpatched software and helps MidAmerican stay current with
10 cybersecurity threats, which, as I noted above, is particularly important given
11 the evolving nature of cybersecurity threats.

- 12 • **Lower operational risk and cost over time:** Many legacy systems are no
13 longer supported by vendors, which limits access to security updates and new
14 functionality. Further, even when supported, legacy on-premises systems
15 require periodic, large-scale upgrade projects to stay supported, which are
16 costly, disruptive and higher risk. Moving to cloud-based and SaaS solutions
17 where possible, as well as limiting customization, reduces reliance on
18 unsupported legacy technology, ensures continued vendor support, and
19 eliminates many of these upgrade events and spreads improvements
20 incrementally over time, which reduces cost volatility and implementation
21 risk and promotes more reliable services over time.

- 22 • **Better scalability, performance and agility to adapt to evolving customer**
23 **needs and expectations:** Legacy on-premises systems are constrained by

1 fixed hardware capacity, while cloud platforms can scale computing
2 resources as demand changes, which is especially important during high
3 usage periods, IT system peaks and emergency events. Cloud and SaaS
4 platforms also support ongoing functional improvements better than legacy
5 on-premises systems, which allows MidAmerican to more quickly respond
6 to changing customer needs and expectations, regulatory requirements and
7 technology advancements without disruptive system replacements.

- 8 • **Better integration, functionality and customer service:** Having multiple
9 software solutions within the same vendor allows them to integrate more
10 easily together, enabling better end-to-end workflows across finance, supply
11 chain, operations and customer service than can be achieved through legacy
12 on-premises systems.

13 **Q. You mentioned moving to a consolidated, shared IT structure across**
14 **domestic BHE utilities. Does that benefit customers as well?**

15 **A.** Yes, it does. Undertaking this modernization effort within a shared IT structure
16 enhances the benefits from these investments. By consolidating IT delivery and
17 support where systems and business needs are common, over time MidAmerican
18 can:

- 19 • Leverage BHE's larger aggregate buying power to obtain more cost-efficient
20 hardware and software pricing;
- 21 • Improve IT cost control by sharing common, ongoing IT operations and
22 maintenance expenses; and

- 1 • Leverage shared expertise to better optimize use of IT resources, avoid
2 duplicative costs and reduce reliance on embedded contractors.

3 As an example, a single support team for a shared system can deliver
4 enhancements that benefit all participating utilities, while allocation
5 methodologies still ensure MidAmerican's customers pay only their appropriate
6 share of the costs. This shared approach improves cost control, strengthens
7 system support and security, and allows MidAmerican to realize the benefits of
8 modern enterprise systems more efficiently than would be possible on a
9 standalone basis. MidAmerican's customers are better served under this
10 consolidated structure than they would be under a stand-alone IT model.

11 **Q. How are shared functions governed?**

12 A. The consolidation combined the IT operational functions and the information
13 security teams from the individual companies and established a Chief
14 Information Officer ("CIO") for BHE. To support the CIO, each individual
15 company is assigned a local IT business leader, who serves as the main point of
16 contact for the individual company. As I noted earlier, I oversee the technical
17 application functions across BHE's U.S.-based utility companies and serve as
18 MidAmerican's IT business lead.

19 **Q. Does consolidation increase costs to MidAmerican or shift affiliate costs to**
20 **South Dakota customers?**

21 A. No, it does not. As I mentioned above, cost allocation methodologies are
22 employed to ensure MidAmerican customers pay only their appropriate share of
23 IT costs. I will discuss these methodologies in more detail later in my testimony,

1 but in short, costs that are specific to MidAmerican are billed directly to
2 MidAmerican. Only truly shared costs are allocated using objective allocation
3 factors tied to each participating utility's scale and use (e.g., employee counts for
4 back office systems and customer or capital measures where appropriate). This
5 ensures MidAmerican customers pay only their proportional share of shared
6 systems and do not subsidize affiliates.

7 **Q. When did MidAmerican consolidate its IT systems and support?**

8 A. The IT consolidation started in 2018 and was completed in 2021. In 2018,
9 MidAmerican was assessing whether to upgrade or replace MidAmerican's aging
10 work and asset management system ("CGI Work Manager").² As part of that
11 analysis, MidAmerican initiated a request for proposals ("RFP") that resulted in
12 the selection of IBM's³ Maximo⁴ ("IBM Maximo" or "Maximo") to replace the
13 existing CGI Work Manager system.⁵ During the RFP process, the team
14 recognized that each of BHE's domestic utilities shared similar needs for work
15 and asset management systems and could realize the benefits of consolidation I
16 discussed earlier if they undertook a joint effort to deploy Maximo as a shared
17 system across the BHE domestic utilities.

² CGI Work Manager is a utility-focused work management software that standardizes how construction, maintenance, and service work is planned, scheduled, executed, and tracked across utility operations. It provides end-to-end visibility into work activities, resources, costs, and progress to improve operational efficiency, regulatory compliance, and cost control.

³ International Business Machines Corporation.

⁴ Discussed in more detail below.

⁵ Upgrades of large vendor systems like CGI Work Manager typically take more than a year to complete. Given the age of that system and the large effort to upgrade, MidAmerican decided to evaluate other software on the market and assess whether it was better to upgrade that system or replace it with a new system.

1 **Q. Did this consolidation and modernization strategy continue into other areas?**

2 A. Yes, in 2019, while the Maximo effort was beginning, a parallel effort was
3 undertaken to evaluate this same approach for additional systems. This effort
4 compared the major systems in use at the BHE utilities and identified other
5 common areas of need, including finance, supply chain, human resources, field
6 dispatch, field execution and customer systems. This coalesced in the
7 comprehensive IT consolidation I described earlier, which avoided a
8 system-by-system approach and instead (consistent with the IT strategy I
9 discussed earlier) focused on vendors that could support multiple needs,
10 streamlining integration, implementation and future upgrades to deliver the most
11 efficient solution. As I will discuss next, this resulted in the selection of Oracle⁶
12 in 2020 as the primary vendor for other shared systems.

13 **IV. SOFTWARE SELECTED AND PROJECTS IMPLEMENTED**

14 **Q. Did MidAmerican build its modernization effort around specific platforms?**

15 A. Yes. MidAmerican's modernization is built around two platforms – IBM Maximo
16 for transmission, distribution, and generation work and asset management
17 functions and Oracle for financial, capital projects and human capital
18 management business functions.

19 **Q. Please describe these platforms in more detail, starting with Maximo – what**
20 **is IBM Maximo and why was it selected?**

21 A. IBM's Maximo is a leading Enterprise Asset Management ("EAM") platform
22 designed to help organizations manage, monitor, and optimize their physical

⁶ Oracle Corporation.

1 assets throughout their lifecycle. Maximo is specifically designed for
2 asset-intensive industries like utilities, oil and gas, nuclear power and
3 transportation, and offers deep configurability and scalability, which lets utilities
4 tailor workflows, asset hierarchies, and maintenance processes to their unique
5 operational needs. Ultimately, Maximo was selected because it is highly
6 configurable and scalable and very suitable for organizations with large physical
7 assets and complex maintenance needs, like MidAmerican.

8 **Q. Similar question regarding Oracle – who is Oracle and why was its platform**
9 **selected?**

10 A. Oracle is a global technology company that offers a wide range of enterprise
11 applications suitable for organizations with complex, integrated business needs.
12 At a high level, Oracle was selected because it offered more system coverage, a
13 better cloud strategy and better opportunities to partner on future system
14 roadmaps.

15 **Q. How was Oracle selected?**

16 A. A review of independent third-party research showed that only two vendors⁷ had
17 sufficiently advanced solutions and ability to cover multiple systems to meet the
18 needs and strategy I outlined above. Accordingly, the evaluation process focused
19 specifically on those vendors.

20 The evaluation process, which included direct conversations and detailed
21 information from each vendor, as well as a series of workshops, demonstrations
22 and follow-up sessions conducted over multiple months that spanned the

⁷ The other vendor was SAP AE.

1 participating utilities' work areas, evaluated the vendors' ability to meet technical
2 and business needs, focusing on the following criteria:

- 3 • Number of software and service solutions that could cover the identified
4 systems of need;
- 5 • Alignment with existing infrastructure needs (database, servers, etc.);
- 6 • Age of software solutions;
- 7 • Cloud strategy and the frequency of updates to these systems;
- 8 • Security compliance against BHE standards; and
- 9 • Short-term and long-term costs of the software.

10 **Q. Please provide more detail about why Oracle was selected.**

11 A. Oracle was a better, more comprehensive fit for our needs and strategy around
12 the shared financial, capital projects and human capital management business
13 functions systems. Primary reasons Oracle was selected include the following:

- 14 • Oracle has product coverage for more of the software solutions needed.⁸
- 15 • Oracle offers supporting technologies, such as databases, that MidAmerican
16 already used, enabling additional economies of scale beyond the application
17 software.
- 18 • The cost proposal for Oracle was less than the SAP solution, when comparing
19 the in-scope solutions.

⁸ For example, Oracle had solutions for enterprise database technology, middleware (integration) technology⁸ and platform as a service ("PaaS") technology, which directly support the IT strategy I described earlier by using a cloud platform managed by the vendor, to avoid recurring infrastructure investments, spread improvements incrementally over time, maintain regular security updates and patches, access integration and extension tools that allows systems to exchange data without building fragile, one-off custom code, and maintain shared services that leverage shared expertise and build economies of scale.

1 **Q. What specific Oracle software is included in the Oracle solution and this**
2 **filing?**

3 A. The new Oracle systems are summarized here, with more detail included in
4 Exhibit DDS 1.1:

- 5 • **Oracle Fusion suite of financial systems**, which includes Enterprise
6 Resource Planning (“ERP”),⁹ Enterprise Performance Management
7 (“EPM”),¹⁰ Project Portfolio Management (“PPM”),¹¹ and Supply Chain
8 Management (“SCM”).¹²
- 9 • **Oracle Human Capital Management (“HCM”)** system, which supports
10 areas such as payroll, recruitment, goal management and career
11 development.¹³
- 12 • **Oracle Capital Projects suite**, which manages the planning and execution
13 of capital projects and supports portfolio management and analysis. This suite

⁹ ERP is the core financial system that manages the chart of accounts and general ledger. It connects various business functions such as accounting, procurement, project management, and supply chain management into a single platform, ensuring data consistency and reducing redundancy.

¹⁰ EPM includes areas such as planning, budgeting, financial reporting, profitability, and cost management. It is primarily used by finance teams but also supports other functional areas such as HR for operational planning and reporting.

¹¹ PPM helps MidAmerican manage its projects. It provides a centralized repository for project-related data, enabling project managers and finance groups to track costs, revenues, work breakdown structures, resource utilization, and overall project profitability.

¹² SCM includes areas such as supply chain planning, inventory management, and order management. It helps manage supply chain operations efficiently and effectively, allowing MidAmerican to respond quickly to changing demand, supply, and market conditions by seamlessly connecting various aspects of the supply chain.

¹³ HCM helps MidAmerican hire, pay, develop and retain the right talent, through features that support recruiting, on-boarding, goal management and career development. Specific areas include payroll and benefits management, workforce management, recruitment management.

1 includes Oracle Primavera P6,¹⁴ Oracle Primavera Unifier¹⁵ and Oracle
2 Primavera Cloud.¹⁶

3 • **Oracle Field Service (“OFS”)**, a cloud-native, mobile-first field service
4 management system designed to coordinate field crews, automate scheduling
5 and provide real-time visibility into field operations.¹⁷

6 • **Oracle Utilities Customer to Meter (“C2M”)**, which is a new customer
7 information system, ancillary software and system integrations that will
8 replace the MidAmerican’s legacy Customer Service System (“CSS”). I
9 discuss CSS and C2M in more detail later in my testimony.

10 **Q. Were other applications beyond Maximo and Oracle necessary?**

11 A. Yes, there were several software systems necessary to meet business and
12 operational needs that, while not within Oracle, interface with Oracle or Maximo.
13 I have summarized them here and provide more detail about them in Exhibit DDS
14 1.1:

¹⁴ Oracle Primavera P6 provides tools for planning, scheduling, and controlling large-scale programs and individual projects. Key features include critical path scheduling for project activities, resource management for capacity planning, and integrated cost management.

¹⁵ Oracle Primavera Unifier is a project management solution, specifically for construction and engineering projects. Key features include project and portfolio management with integrations for funding, budgets, contracts, procurement and change management.

¹⁶ Oracle Primavera Cloud extends the capabilities of Oracle Primavera P6 by offering a platform for risk management and further resource schedule optimization.

¹⁷ MidAmerican uses OFS to manage both planned field work (such as meter installations, inspections, and maintenance) and unplanned work (including outages, gas leaks, and emergency calls). OFS provides a centralized scheduling platform that consolidates work from source systems, supports real-time routing and resource allocation based on skills and job status, integrates digital workflows across systems, and enables field crews to capture commissioning, decommissioning, and maintenance data that supports asset integrity and system reliability.

- 1 • **Vertex software**, which is a transactional tax (sales/use/GST/VAT¹⁸) system
2 that interfaces with the new Oracle Fusion ERP to analyze the tax
3 requirements of purchase transactions.¹⁹
- 4 • **Kyriba software**, a comprehensive, secure, and scalable treasury
5 management system for daily cash positioning, cash forecasting and debt and
6 investment reporting/analysis that sends journal entries directly to the
7 General Ledger within Oracle Fusion on a daily and monthly basis.²⁰
- 8 • **GridSwift (“GIST”)**, a secure mobile graphical information system
9 developed in-house that works alongside OFS and integrates with Maximo
10 and the mapping system (GIS²¹) to modernize field operations, providing an
11 adaptive mobile experience tailored to the specific roles and tasks of
12 MidAmerican’s field workforce that merges work visualization with mapped
13 facilities, both online and offline, to promote efficient, accurate and safe
14 execution of work.²²

¹⁸ Goods and services taxes and value-added taxes.

¹⁹ Specifically, Vertex is a transactional tax system that determines the taxability of Company purchases, automatically accrues use tax to the appropriate state, provides monthly tax rate and rule updates to maintain compliance with state changes, verifies the tax treatment of invoices and applies the appropriate action, and supports audit defense by producing a transparent, documented methodology that can reduce audit scope.

²⁰ The finance team’s ability to manage treasury operations and mitigate risks through Kyriba helps improve financial decision making.

²¹ Geographic Information System.

²² GIST is a mobile, map-based field application that integrates with Maximo, GIS, and OFS to provide geographically driven field work capabilities, allowing technicians to visualize assigned work and assets on interactive maps, move seamlessly between systems based on task type, create follow-up work directly from mapped facilities, and execute workflows. This supports efficient field execution, accurate data capture, and reliable operations.

- 1 • **PowerPlan**, an accounting suite designed to help manage the entire
2 accounting lifecycle from the long-term asset, nearer term capital and
3 departmental budget, tax and regulatory changes that includes the
4 PowerPlant,²³ Tax Provision,²⁴ Property Tax²⁵ and Tax Repair²⁶ modules.
- 5 • **Genesys**, a cloud enterprise phone system that integrates with
6 MidAmerican's core customer system and telecom systems to provide
7 context-aware communication with customers, including Interactive Voice
8 Response (IVR) and live web chat for account support to give customers
9 better choice, control and responsiveness in their service.²⁷

10 **V. SYSTEM DELIVERY, COST ALLOCATION AND BENEFITS**

11 **A. Delivery**

12 **Q. How were the shared systems delivered?**

13 A. A multi-year roadmap was developed to deliver the shared systems across the
14 different BHE companies. The effort to deliver was organized with an

²³ PowerPlant optimizes financial and operational asset data by integrating financial and operational data from various sources to provide a unified view for stakeholders. For MidAmerican, this includes areas such as the Maximo work and asset Management system. The system helps companies manage compliance risk and develop strategic financial asset scenarios.

²⁴ Tax Provision handles the income tax accounting needs of regulated companies. It helps minimize manual workloads through built-in interfaces and facilitate consolidated tax adjustments.

²⁵ Property Tax simplifies the property tax process by automating the full property tax cycle, from preparing returns to tracking assessments to paying bills and calculating accruals.

²⁶ Tax Repairs automates the calculation of tax repairs, simplifies the analysis of deductions and capital add-ons, and integrates with other financial management systems (for MidAmerican, the new Oracle Fusion ERP).

²⁷ Specific Genesys features include interactive voice response, which uses active connections to the core customer system to allow customers to use their phone for self-service support related to their account; customer agent support, which captures data that helps show analytics and trends for issues, concerns, or feedback as customer calls are sent to agents for direct interactions; and live web chat, which allows customers who want to stay on the self-service website to use a live chat option to connect directly with a self-service portal or work with an agent directly.

1 implementation partner, IT resources, and local business resources. The major
2 elements of this effort included:

- 3 • Determining a global design for the solutions to meet the companies' needs;
- 4 • Establishing connections to any legacy systems that would still be needed;
- 5 and
- 6 • Deploying the software at each company along a set timeline to help control
- 7 costs and resources.

8 **Q. Has MidAmerican deployed all the systems you identified earlier in your**
9 **testimony?**

10 A. Yes, other than the Oracle C2M system, which I will discuss in more detail below.
11 Exhibit DDS 1.1 includes the specific in-service date for each system.

12 **Q. Has MidAmerican undertaken additional work after deployment to enhance**
13 **the performance of systems placed in service?**

14 A. As is normal for lifecycle management for large enterprise system
15 implementations, MidAmerican is undertaking post-deployment optimization
16 work to improve performance, stabilize operations and enhance integrations
17 among the new systems. For Maximo and field integrations, MidAmerican used
18 a structured approach with periodic release groupings, with the most recent set
19 of planned integration enhancements completed in December 2025. For Oracle
20 Fusion, Oracle Capital Projects, OFS and related integrations, MidAmerican uses
21 an ongoing release management process to prioritize and implement
22 enhancements in planned release cycles, which supports continuous
23 improvement while maintaining governance over scope, timing and cost.

1 **Q. You indicated Oracle C2M has not yet been deployed and is still in progress.**
2 **Please share more details about the status of that project.**

3 A. As I mentioned earlier in my testimony, the Oracle C2M project will implement
4 a new customer information system, ancillary software, and system integrations
5 to replace MidAmerican's legacy CSS system. The project is in progress and is
6 projected to be in service in 2027. When completed, C2M will support
7 MidAmerican's billing and relationship management of over 1.6 million
8 customers across its four-state service territory (as of July 2026), including the
9 more than 115,000 natural gas customers in South Dakota.

10 **Q. Please describe CSS and explain why it's necessary to replace it.**

11 A. Like many systems replaced in this modernization effort, CSS is a mainframe
12 legacy system. The initial CSS, which MidAmerican placed in service in 1998,
13 utilized IBM mainframe technologies and provided an integrated solution for
14 MidAmerican's customer service needs, but was limited to supporting billing and
15 customer care functions.

16 Over time, MidAmerican enhanced the core CSS products to meet
17 evolving customer and regulatory expectations, by (1) adding the
18 Customer Relationship Management function in 2001 to better integrate
19 customer contact management, (2) integrating the Mobile Workforce
20 Management function in 2005 to improve field service coordination for customer
21 requested work orders and better track net metering and customer generation data
22 collection and billing compatibilities, and (3) expanding CSS in 2018 to add web
23 and mobile features for customers to manage their accounts, pay bills and report

1 outages, among other services.²⁸ However, even with these enhancements, CSS's
2 ability to meet evolving, modern customer expectations has become limited.

3 **Q. How is CSS limited?**

4 A. Age has pushed CSS to its limits for performance, stability, security, upgrades
5 and technical support. The current hardware and software prohibit flexibility,
6 integration and forward adoption of new technologies. The IBM mainframes
7 were invented and built to serve customers' information technology needs before
8 mobile phones and internet use were widely adopted. Fast forward several
9 decades, and the mainframes have limited ability to incorporate modern services,
10 advanced rate structures or technologies. Focusing on interval meter data
11 specifically, CSS lacks the ability to store and process large amounts of interval
12 data, which inhibits MidAmerican's ability to create time-based profiles that help
13 customers see when energy is used.

14 **Q. Are there other limits to CSS?**

15 A. Yes. MidAmerican's ability to maintain CSS is at risk given the shifting
16 marketplace over the last decade from on premises hardware and software to
17 cloud or remote-based software and hardware. IT professionals have skill sets
18 that align with the current state of the industry, not mainframe software from the
19 1990's. Additionally, on limited occasions CSS has been unresponsive due to
20 high workloads and constraints of resources in the mainframe resulting from
21 simultaneous events such as large customer outages or higher call volume. This

²⁸ MidAmerican also added customer preferences and notification support in 2018 to offer customer communication channel preferences.

1 is of particular concern as the demands from customers for access to information
2 are only increasing.

3 **Q. How will Oracle C2M be better than CSS and benefit customers over time?**

4 A. Oracle C2M will be based on modern technological platforms and include the
5 necessary functionality to effectively provide the service our customers expect.
6 Examples of short and long-term benefits from C2M include the following:

- 7 • Better customer experience from streamlined processes and systems.
- 8 • Ability to continually improve system functions, such as rate schedule billing,
9 by configuration as opposed to more expensive customizations under CSS.
- 10 • Enhanced customer service processes that provide more accurate and timely
11 resolution of customer service requests.
- 12 • Ability to assist customers with guided actions based on analytical customer
13 data.
- 14 • Ability for customers and employees to interact using the communication
15 device of the customer's choice (text, email, phone, mail, mobile application).
16 All engagement channels will feel seamless when migrating from one to the
17 other, avoiding lost data or confusion for the customer.
- 18 • Integration of communication strategies within solutions, minimizing manual
19 intervention and facilitating real-time assignment of work to increase
20 efficiencies for employees and expedite successful outcomes for customers.
- 21 • Ability for customers to customize usage alerts through their choice of text,
22 email, or phone when their energy usage may move them into a higher and
23 more expensive tier.

- Replacement of outdated mainframe interfaces used by customer service agents to improve efficiency, including faster insights to better serve customers and interact with field personnel.
- Remediation of inflexibility issues in CSS that require expensive and time-consuming custom changes.
- Remediation of capacity and performance issues within CSS to ensure system availability during high usage times (like customer outages and events).
- Ability to implement changes through configurable systems, which decrease the time and cost required to implement future customer and regulatory requirements.
- Ability to handle complex billing issues (like coincidental peak demand across multiple meters) that CSS cannot handle, which will eliminate labor-intensive, manual processes that have the potential for human error.

B. Cost Allocation

Q. How were the costs for shared systems allocated among the BHE utilities?

A. Costs specific to MidAmerican were billed directly. Global costs with an allocation to MidAmerican were then applied through various allocation methods, depending on the system being implemented. Specifically:

- Each solution has a global or shared cost component to implement, which included benefits to all companies planning to use the software.
- During implementation, there are also local or dedicated costs to the implementing company for specific needs within the software.

1 **Q. Please elaborate on that.**

2 A. For global or shared costs, employee count-based allocations are a standardized
3 approach used to allocate most of the back-office (Oracle Fusion) system costs,
4 while customer counts and capital spend were utilized to allocate costs related to
5 customer and capital projects systems across affiliated platforms, respectively.
6 This ensures that the costs allocated reasonably reflect the relative scale of each
7 entity's workforce and operations and benefit from shared systems and
8 initiatives. The intent of the allocation methodology is to make sure that each
9 utility, including MidAmerican and its customers, incur only their fair share of
10 the applicable costs.

11 **Q. Do the costs included in this rate case for the systems you have identified**
12 **reflect the allocation methodology you described, and are they reasonably**
13 **and fairly allocated to MidAmerican?**

14 A. Yes.

15 **C. Benefits of System Modernization**

16 **Q. Do the software solutions you have identified implement the strategy and**
17 **achieve the customer benefits you discussed earlier in your testimony?**

18 A. Yes, very well. At a high-level list, the benefits from the new systems include the
19 following:

- 20 • Most of the new systems were selected under a common vendor (Oracle),
21 which enables tighter integration and more efficient end-to-end workflows –
22 for example, OFS (Oracle Field Service) can connect directly with SCM

1 (Oracle Supply Chain Management) so field crews can view and update
2 inventory in real time, reducing manual steps and delays.

- 3 • Many of the new systems are implemented in the Oracle Cloud, which
4 improves reliability and performance compared to legacy systems built on
5 older hardware in local data centers that had limited ability to quickly address
6 disaster recovery (DR) and performance needs.
- 7 • Many of the new systems are delivered as SaaS. Hosting this SaaS software
8 in the Oracle Cloud rather than locally allows for automatic updates that are
9 applied every quarter, avoids large, costly implementation projects to upgrade
10 and apply patches and avoids the risk of being behind the latest security
11 patches. Being up to date for security patches is critical to stay protected
12 against the evolving cyber security risks I noted earlier, and the new systems
13 position MidAmerican to maintain that protection well.
- 14 • The design of the new systems maximized the “out of the box” functionality
15 and limited customizations. This will reduce risk going forward during
16 continuous patch and upgrade needs.
- 17 • Accomplishing this through a consolidated IT approach with other domestic
18 BHE utilities better controls costs because shared systems better optimize the
19 use of the team. For example, a single IT team supporting Maximo can
20 enhance the system and provide benefits for all companies using it. This
21 spreads costs while increasing benefits.
- 22 • Many of the legacy systems replaced were no longer supported by their
23 corresponding vendors. The absence of support for continuous security

1 patches adds risk and impairs MidAmerican's ability to adopt new
2 functionality to meet customer needs. The configurable, supported systems
3 implemented in the modernization make MidAmerican's systems more
4 secure and make MidAmerican more flexible and agile when addressing new
5 or future customer needs.

6 **Q. You specifically highlighted the need to protect MidAmerican's systems and**
7 **assets against cybersecurity risks and events. Do the new systems and recent**
8 **improvements enhance MidAmerican's ability to address these**
9 **cybersecurity challenges?**

10 A. Yes, they do. As mentioned previously in this testimony, many of the legacy
11 systems in place were running on outdated hardware and on unsupported
12 software. Once this happens, security patches are no longer provided to meet the
13 ever-growing number of cyber risks. A traditional upgrade to the software would
14 help alleviate this in the short term, however, advances in technology offer a more
15 cost-efficient strategy to meet this demand. Where possible, moving to cloud-
16 based SaaS solutions ensures updates are happening on a regular basis (quarterly
17 for Oracle Fusion for example).

18 **Q. What about software that is not a SaaS solution?**

19 A. Not all software has an option for SaaS. Where SaaS is not a feasible option,
20 MidAmerican's "continuous improvement" structure steps in to apply updates on
21 a more frequent schedule (such as annual for Maximo). Taking this approach
22 alongside other companies within BHE's consolidated IT strategy helps meet
23 these demands in a cost-effective manner with shared IT costs. The cybersecurity

1 threat is not going away, but maintaining continuous updates and active patch
2 processes strengthens MidAmerican's ability to meet these risks.

3 **Q. What's next for MidAmerican? Do these new systems and improvements**
4 **position MidAmerican for future improvements and enhancements that will**
5 **benefit customers?**

6 A. These new systems help MidAmerican meet customer demands and maintain a
7 secure, compliant, and cost-effective technology strategy for the future.
8 Specifically,

- 9 • The core systems across finance, work, asset and field management will be
10 able to be updated on a frequent basis without incurring large, multi-year
11 upgrade projects.
- 12 • The new systems establish a more modern underlying data platform for better
13 analytics and data-driven decision making, such as the recent Asset,
14 Performance, and Investment Management ("APIM") project, which
15 integrates asset data, performance metrics, and analytics to provide a more
16 complete and consistent view of asset health across the system, supporting
17 more informed maintenance, replacement and capital investment decisions
18 that drive reliable service and responsible cost management.
- 19 • Modernized primary systems allow further advancements that improve
20 operational effectiveness and customer service, like Advanced Metering
21 Infrastructure ("AMI"), which enables more accurate billing, faster outage
22 identification, and improved customer communication.²⁹

²⁹ AMI is a system of networked meters, communications technology, and supporting software that enables two-way communication between a utility and customer meters. AMI allows utilities to collect usage data

1 Although AMI is not in the systems included in this rate case, those
2 systems set the stage for this and other improvements, providing a foundation for
3 future operational, customer service, and reliability gains.

4 **VI. CONCLUSION**

5 **Q. Does this conclude your direct testimony?**

6 **A. Yes, it does.**

at regular intervals, detect outages more quickly, and perform certain functions remotely, reducing manual field work. Implementing AMI would improve customer service by providing more timely and accurate billing information, faster outage identification and restoration, greater visibility into energy usage, and enhanced ability to offer customer tools, alerts, and programs that reflect how and when energy is used.